

# Author:Jagadish Chandra Bose

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**Jagadish Chandra Bose**  
(1858–1937)

Indian polymath, physicist, biologist, botanist, archaeologist, science fiction writer; credited with the invention of the first wireless detection device and the discovery of millimetre length electromagnetic waves and considered a pioneer in the field of biophysics



sister projects: Wikipedia article, Commons category, quotes, Wikidata item.

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## Works

### Research Papers

(The following original physical papers describe the invention of the radio, as now recognised by the IEEE, *vide* here ([http://web.mit.edu/varun\\_ag/www/bose\\_real\\_inventor.pdf](http://web.mit.edu/varun_ag/www/bose_real_inventor.pdf)) and here (<http://www.cv.nrao.edu/~demerson/bose/bose.html>).)

- On Polarisation of Electric Rays by Double Refracting Crystals (1895)
- On A New Electro-Polariscope (1895)
- On Double Refraction of the Electric Ray by a Strained Dielectric (1895)
- On the Determination of the Index of Refraction of Sulphur for the Electric Ray (1895)
- On the Determination of the Wave-length of Electric Radiation by Diffraction Grating (1896)
- On the Selective Conductivity exhibited by certain Polarising Substances (1897)
- On the Determination of the Index of Refraction of Glass for the Electric Ray (1897)
- On the Influence of the Thickness of Air-space on Total Reflection of Electric Radiation (1897)
- On a Complete Apparatus for the Study of the Properties of Electric Waves (1897)
- A Simple and Accurate Method of Determination of Index of Refraction for Light (1895)
- On the Rotation of Plane of Polarisation of Electric Waves by a Twisted Structure (1898)
- On the Production of a 'Dark Cross' in the Field of Electro-magnetic Radiation (1898)
- On a Self-recovering Coherer and the Study of the Cohering Action of different Metals (1899)
- On the Periodicity in the Electric *Touch* of Chemical Elements. Preliminary Notice (1900)



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- On Electric Touch and the Molecular Changes produced in Matter by Electric Waves (1900)
- On the Continuity of Effect of Light and Electric Radiation on Matter (1901)
- On the Similarities between Radiation and Mechanical Strains (1901)
- On the Strain Theory of Photographic Action (1901):
- On the Change of Conductivity of Metallic Particles under Cyclic Electromotive Variation (1901)
- On Electromotive Wave accompanying Mechanical Disturbance in Metals in Contact with Electrolyte (1902)

## Patents

- US Patent 755,840 A (Bose's Wireless Detector) (1904)

## Books

[**Note:** Bose's experiments on plants, although pioneering works in biophysics, have elements of controversy, because of the interpretations he derived from the results. For details on his interpretations, see the article Plant perception (paranormal) and the book *The Secret Life of Plants*.]

- Response in the Living and Non-Living (1902): (transcription project), Project Gutenberg (<http://www.gutenberg.org/ebooks/18986>)
- Plant Response (1906): (transcription project)
- Comparative Electro-physiology (1907): (transcription project)
- Researches on Irritability of Plants (1913)
- Life Movements in Plants
  - Vol 1 (1918)
  - Vol 2 (1919): (transcription project), Project Gutenberg (<http://www.gutenberg.org/ebooks/40050>)
  - Vols 3 & 4 (transcription project)
- The Physiology of the Ascent of Sap (1923) (transcription project)
- The Physiology of Photosynthesis (1924): (transcription project)
- Plant Autographs and Their Revelations (1927) (transcription project)
- Collected Physical Papers (1927): (With Foreword by J. J. Thomson)

## Works about Bose

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- To Sir Jagadish Chandra Bose by Rabindranath Tagore, translated by Manmohan Ghose
- Sir Jagadis Chunder Bose, His Life and Speeches: Project Gutenberg (<http://www.gutenberg.org/ebooks/22085>)
- Sir Jagadish Chander Bose, his life, discoveries and writings (1921) (external scan (<https://archive.org/details/in.ernet.dli.2015.82265>))
- The Life and Work of Sir Jagadis C. Bose (1920) by Patrick Geddes: (transcription project)
- India's Great Scientist and Inventor, Jagadis Chandra Bose by Paramahansa Yogananda
- Acharya Jagadis Chunder Bose - His Life and Work by Daulat Singh Kothari (1958): (external scan ([http://www.new1.dli.ernet.in/data1/upload/insa/INSA\\_1/20005b71\\_325.pdf](http://www.new1.dli.ernet.in/data1/upload/insa/INSA_1/20005b71_325.pdf)))
- "Bose, Jagdish Chandra," in *The Indian Biographical Dictionary*, by C. Hayavadana Rao, Madras: Pillar & Co. (1915)

- *Acharya Jagadis Chandra Bose, a Scientist and a Dreamer*: An account of the scientific work of Jagadis Chandra Bose: the physical sciences, v. 1 (1895-1918), v. 2 (1919-1921); plant responses, v. 3 (1924-1934); v. 4 comprises of his speeches, selected letters, and articles; v. 5, letters to Rabindranath Tagore. Ed. Prantosh Bhattacharyya, Meher H. Engineer, Arun Kumar Das Gupta, Rukmini Mitra (1 (<http://resources.jcbose.ac.in:8080/xmlui/handle/123456789/70>), 2 (<http://resources.jcbose.ac.in:8080/xmlui/handle/123456789/71>), 3 (<http://resources.jcbose.ac.in:8080/xmlui/handle/123456789/73>), 4 (<http://resources.jcbose.ac.in:8080/xmlui/handle/123456789/74>), 5 (<http://resources.jcbose.ac.in:8080/xmlui/handle/123456789/72>))

## External Resources

- " Works at Internet Archive (<https://archive.org/search.php?query=creator:%22Bose%2C+Jagadis+Chandra%2C+Sir%2C+1858-1937>)
- Works at Project Gutenberg (<http://www.gutenberg.org/ebooks/author/8388>)
- Bose Institute Library (<http://resources.jcbose.ac.in:8080/xmlui/handle/123456789/24>)

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